

Applicant : Nathaniel M. McCully
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Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for typesetting a text line, comprising:
determining dimensions of each of a plurality of characters to be typeset on a text line;
associating a distinct embox with for each of the plurality of characters, each embox having an outer frame demarcated by the dimensions of the associated character of the plurality of characters;
associating a reference character with each of the plurality of characters, each associated reference character being one of one or more preselected reference characters, each reference character of the one or more preselected reference characters all being characters from one having the same font and dimensions as the associated character of the plurality of characters;
using the associated reference character to determine a coordination point for each distinct embox and thereby determine a coordination point for each of the plurality of characters;
and
aligning each distinct embox with a coordination line using the determined coordination point for each of the plurality of characters to typeset the plurality of characters on the text line.
2. (Currently Amended) The method of claim 1, wherein each of the plurality of characters has a point dimension and the one or more preselected reference characters include a reference characters at each distinct having the same point dimensions as found among the plurality of characters.
3. (Previously Presented) The method of claim 2, wherein the one or more preselected reference characters are each a CJK font character.

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4. (Previously Presented) The method of claim 1, wherein the one or more preselected reference characters are each a European-language en uppercase letter having a cap height.
5. (Previously Presented) The method of claim 4, wherein the one or more preselected reference characters are each an en H or an en X.
6. (Previously Presented) The method of claim 1, wherein determining the coordination point for each of the plurality of characters comprises:
 - determining a glyph bounding box for the one or more preselected reference characters;
 - centrally positioning the glyph bounding box in each distinct embox; and
 - determining a point on the glyph bounding box as the coordination point of each distinct embox.
7. (Cancelled)
8. (Currently Amended) The method of claim 1, further comprising:
 - finding a largest character having a largest point dimension among said plurality of characters;
 - setting a line height for the text line to be a height of said largest character; and
 - aligning the coordination point of each of the plurality of characters with a coordination line for the largest character text line.
9. (Currently Amended) The method of claim 1, wherein determining the coordination point for each of the plurality of characters comprises:
 - determining the a glyph bounding box for the one or more preselected reference characters;
 - determining an average value for top, bottom, left, and right differences between said embox and said glyph bounding box;
 - determining an ideographic character face box located inside and separated from said embox edges by the average value; and
 - determining a point on the ideographic character face box as the coordination point.

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10. (Original) The method of claim 9, wherein N ($N \geq 2$) reference characters are present, and determining the average value comprises dividing the sum of the top, bottom, left, and right differences obtained for the N reference characters by $4N$ to determine said average value.

11. (Previously Presented) The method of claim 1, wherein determining the coordination point for each of the plurality of characters comprises:

determining a glyph bounding box for the one or more preselected reference characters;
determining a first average value for a top and bottom difference between the embox and the glyph bounding box;
determining a second average value for a left and right difference;
determining an ideographic character face box located inside and separated from said embox top and bottom edges by the first average value and the embox left and right edges by the second average value; and
determining a point on the ideographic character face box as the coordination point.

12. (Previously Presented) The method of claim 9, wherein the one or more preselected reference characters include a glyph whose shape is substantially a square.

13. (Previously Presented) The method of claim 12, wherein the one or more preselected reference characters include the Japanese ideographs "utsu" and "naga."

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14. (Currently Amended) A computer program product, stored on a machine-readable medium, comprising instructions operable to cause a programmable processor to:
- select a coordination line for the text line to coordinate a plurality of characters for typesetting the text line,
 - determine the dimensions of each of the plurality of characters to be typeset on the text line,
 - associate a distinct embox with each of the plurality of characters, each embox having an outer frame demarcated by the dimensions of the associated character of the plurality of characters;
 - associate a reference character with each of the plurality of characters, each associated reference character being one of one or more preselected reference characters, each reference character of the one or more preselected reference characters all being characters from having the same one font and dimensions as the associated character of the plurality of characters;
 - use the associated reference character to determine a coordination point for each distinct embox and thereby determine a coordination point for each of the plurality of characters; and
 - align each distinct embox with the coordination line using the determined coordination point for each of the plurality of characters to typeset the plurality of characters on the text line.
15. (Currently Amended) The product of claim 14, wherein each of the plurality of characters has a point dimension and the one or more preselected reference characters include a reference characters having the same at-each distinct point dimensions as found among the plurality of characters.
16. (Previously Presented) The product of claim 15, wherein the one or more preselected reference characters are each a CJK font character.
17. (Previously Presented) The product of claim 14, wherein the one or more preselected reference characters are each a European-language en uppercase letter having a cap height.

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18. (Previously Presented) The product of claim 17, wherein the one or more preselected reference characters are each an en H or an en X.

19. (Previously Presented) The product of claim 14, wherein the instructions to determine the coordination point for each of the plurality of characters comprise instructions to:

determine a glyph bounding box for the one or more preselected reference characters;
centrally position the glyph bounding box in each distinct embox; and
determine a point on the glyph bounding box as the coordination point of each distinct embox.

20. (Cancelled)

21. (Currently Amended) The product of claim 14, further comprising instructions to:

find a largest character having a largest point dimension among said plurality of characters;
set a line height for the text line to be a height of said largest character; and
align the coordination point for each of the plurality of characters with a coordination line for the largest character text line.

22. (Currently Amended) The product of claim 14, wherein the instructions to determine the coordination point for each of the plurality of characters comprise instructions to:

determine the a glyph bounding box for the one or more preselected reference characters;
determine an average value for top, bottom, left, and right differences between said embox and said glyph bounding box;
determine an ideographic character face box located inside and separated from said embox edges by the average value; and
determine a point on the ideographic character face box as the coordination point.

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23. (Original) The product of claim 22, wherein N ($N \geq 2$) reference characters are present, and the instructions to determine the average value comprise dividing the sum of the top, bottom, left, and right differences obtained for the N reference characters by $4N$ to determine said average value.

24. (Previously Presented) The product of claim 14, wherein the instructions to determine the coordination point for each of the plurality of characters comprise instructions to:

determine a glyph bounding box for the one or more preselected reference characters;

determine a first average value for a top and bottom difference between said embox and said glyph bounding box;

determine a second average value for a left and right difference;

determine an ideographic character face box located inside and separated from said embox top and bottom edges by the first average value and the embox left and right edges by the second average value; and

determine a point on the ideographic character face box as the coordination point.

25. (Previously Presented) The product of claim 22, wherein the one or more preselected reference characters include a glyph whose shape is substantially a square.

26. (Previously Presented) The product of claim 25, wherein the one or more preselected reference characters include the Japanese ideographs "utsu" and "naga."

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27. (Currently Amended) A desktop publishing system for controlling typesetting of a text line, comprising:

a desktop publishing processing control device provided with a font file and with typesetting control means, the font file containing character font information for performing typesetting;

a display device for displaying data that is being typeset; and

input means for receiving user input;

said typesetting control means having a text line typesetting control means adapted to arranging a plurality of characters to be coordinated with a coordination line of a text line by determining dimensions of each of the plurality of characters to be typeset on the text line,

associating a distinct embox with each of the plurality of characters, each embox having an outer frame demarcated by the dimensions of the associated character of the plurality of characters.

associating with each of the plurality of characters a reference character, each associated reference character being one of one or more preselected reference characters, each reference character of the one or more preselected reference characters all being characters from one having the same font and dimensions as the associated character of the plurality of characters.

using the associated reference character to determine a coordination point for each distinct embox and thereby determine a coordination point for each of the plurality of characters, and

performing line typesetting processing by aligning each distinct embox with the coordination line using the determined coordination point for each of the plurality of characters.